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THE CONCEPT OF TIME[1]

I HAVE been asked to say a few words by way of exposition of a theory of time, which I have been bold enough to advance in a recent monograph entitled 'Time and Reality,' published by the *Psychological Review*. You know with what reluctance a man does anything of this kind, but I have taken this opportunity to clarify if possible some misunderstandings, and principally to afford a target for discussion. At most this paper must be regarded as a supplement to the monograph mentioned above, not a restatement.

The epistemological and metaphysical importance of the concepts of time and space was first clearly seen by Kant; and with him, as we well know, the difficulties encountered in the traditional treatment of these concepts became the signal for a change of front in epistemological and metaphysical discussion. Little has been done in clarifying those concepts after Kant, until within comparatively recent years. Thanks to the philosophical mathematicians such as Riemann, Klein, Poincaré, etc., the concept of space has emerged from the realm of mythology to an important place in the logic of definition. The concept of time, however, has in the meantime received very little metaphysical consideration beyond repeating the theses of Kant. This is owing, no doubt, in part to the difficulty of the concept, in part to its seeming lack of opportunity for logical elaboration. I can not help feeling, however, that both epistemologically and metaphysically time is the more important concept of the two, however great may be the opportunity offered by the space concept for logical pyrotechnics.

Whether we regard space as subjective or objective, we all agree now that space must be such as to make no difference to contents in space. It enables us to spread these contents out, and herein lies its convenience, but it makes no intrinsic difference to the facts thus

[1] Paper read before the Western Philosophical Association, April 21, 1905, at Lincoln, Neb., with some additions growing out of the excellent discussion of the previously published monograph by Professors Hinmann and Lovejoy at the above meeting.

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spread out. Free mobility is one of the few axioms that critical geometry has left standing. Logically, therefore, we can easily abstract from space. But not so with time. Whatever theory we may hold as regards time, it must be admitted that time alters our contents, makes an intrinsic and not merely an external difference. So far from the axiom of free mobility being applicable to time, consciousness, in so far as time pertains to it, is by all agreed to be irreversible. Contents are less vivid and distinct, assume different values and, above all, bear a different functional relation to the present subject. This has made even those who regard time, with Kant, as subjective speak of it as an irreversible series, though, as I have tried to show in the essay referred to, irreversible is applicable only to process, not to series. How a subjective form can be irreversible passes understanding.

Leaving out all dialectic subtleties, let us try to define the fundamental character of time. The difficulties besetting one's path on such a quest are due in part to the confused character of the concept as we find it in common-sense thinking, but still more to the idols of the philosophic tribe. From Zeno down to Bradley it has been taken for granted that time is serial in nature, and the arguments for and against its reality have always assumed this serial character. Assuming time as an order series, Kant was the first one to show that time must be subjective. That he also regarded it as irreversible and as a condition of moral activity does more credit to his insight than to his consistency. Since Kant idealism, using the Kantian weapons, has made short work of a serial real time. I agree entirely with the Kantians that if time is serial it must be regarded as a subjective or ideal construction. But I also hold that philosophy has emphasized the wrong aspect of the somewhat ambiguous common-sense concept. The flying, fleeting, evanescent character of experience, it seems to me, is the primary character of time. The serial character is secondary, and is the result of *a posteriori* construction necessitated by the real time character. We construct past and future because our contents *have* the time character, because they are forever going and coming; contents do not come and go, arise and fade, because of our series.

To discover what time is we must discover the differentia of time. We must get over our intellectual slovenliness in simply dumping things together. This is especially true of time. We have been too prone to be satisfied when we have reduced it to one dimension of space, to number, to quantity, to causality, to will, and what not, if, indeed, we have gotten beyond identifying it with the stream of consciousness as a whole. No doubt the time concept has important relations to all of these concepts. But these rela-

tions are obscured by the neglect of differences which fail to give the time concept any assignable significance. Such obscurity makes time as a logical tool for describing experience worse than useless. If the time concept makes no difference to experience let us drop it out altogether. Using the pragmatic test, then, which I applied ignorantly some years ago, let us see what difference time makes to experience.

Do you say that time is a series? Then by what mark is time as a series differentiated from all other series concepts? To illustrate by another concept, more familiar: If you say, for example, that space is a complex of series, you have at most only mentioned the genus. This would not differentiate it from color and taste series. If you say with Riemann that space is a manifold, you have again furnished only a large genus. I am taking for granted that you will try to talk sense and not simply reply in a lazy way that space is very complex and includes everything, as some of my critics have said of time. Obviously what differentiates space from the mere series concepts or mere group concepts is that space is an ideal construction of *extensive* data or is an *extensive* manifold. Extensity is thus the character that differentiates space from other concepts of the kind referred to. If we return now to time as serial, we must here, too, discover precisely what difference it makes as a concept, what marks it as distinct from other series concepts. The answer you get when you ask: What sort of a series is a time series? is something like the answer of a friend when you ask him: When are you going to Chicago? and he replies: Who says I am going to Chicago? Or the answer in algebra to the question: What positive quantity results from adding 4 and —8? and you get the answer —4. The answer here shows that the question involved a wrong presumption. Well, so with the answer to the question: What are the differentia of a time series? The answer is: A time series is a series in which contents keep passing out and coming in and in which no position can be defined with reference to any other position, because every position is shifting in value with reference to every other. In so far, in other words, as you want to have a series with definite positions, in so far you must ignore the time character of experience. In so far, again, as you le. in time, your serial construction fails to define. The answer to the question: What sort of a series is time? seems to be that time can not be expressed as series at all.

We have said that the test of the nature of time must be the difference it makes to experience. The term experience, however, must be narrowed down for logical purposes. I believe that there are several types of experience and that reflective experience is only

one out of these, no more real than the others. But what we are concerned with here is only reflective or judging experience. The question then is: What difference does time make to our judging experience and to other forms as reported to this? Evidently time bears a peculiar relation to the law of contradiction. The law of contradiction is only applicable, as a matter of fact, if you exclude time. The law of contradiction says that different judgments can not be made with reference to the same point in our space system and in the same respect. But that an object can be white and, where it is white, be not-white; that a thing can both be and not be in the same place—are matters of every-day experience. A timeless universe would break down under its own contradictions. Time, then, is that aspect of experience which makes it both possible and necessary to make different judgments with reference to the same point in reality and with reference to the same attribute or within the same universe of discourse, *i. e.*, to judge that reality is both white and not-white, warm and not-warm with reference to the same point of space. Here the law of contradiction is not violated. It simply finds a new dimension by means of which incompatible judgments can occupy the same space without proving destructive.

The so-called law of universality proves equally an abstraction. Once true always true could only hold in a timeless universe or by abstracting from time. Experience shows too clearly that neither facts nor meanings have much stability. All *our* world is capable of is such relative universality and uniformity as enables us to come in a fair way toward agreement and anticipate for practical ends the processes of nature. Thus the relative and instrumental nature of knowledge becomes evident. It must not be forgotten, however, that knowledge is not something external to conscious process, but a tool of its own devising for the furtherance of its own ends.

What I have tried to show is that time does make a difference, and that the difference it makes is that we must revise our judgments or make new judgments in order to meet the requirements of experience. If time made no difference, if experience could be described as well without it, then we should have one eternal moment of reality with a timeless scale of values. Once seeming true would be always seeming true in such a world.

I have been criticized for speaking of the character of time as a negative character. It has been pointed out that what time *does* is something positive. It is responsible for passing away and novelty, it makes necessary new judgments of reality. All that is very true. And that leads me to point out that time bears a different relation to knowledge from that of any other character of reality. Terms and the concepts they stand for indicate contents abstracted

from the concrete context of experience. But the positive contents of experience, whether qualities or relations, have a *place* within experience; they are something as it were on their own account and can be set off from other contents, or pointed to. Blue is not only describable as different from other contents or like other contents, but can be indicated as a positive blue fact as well. But not so with time. Time is known only through its other. If we say fleeting or passing we must think of fleeting values, not of fleeting time. It is the instability of all our facts and values that makes us suspect the presence of the time character. The evidence for it is thus altogether indirect, *i. e.,* in the difference it makes to our meanings. To try to point to the time character as we point to blue or red would be like the schoolmaster's saying: I see some boys that are not here. Time knows no proximate genus under which it can be subsumed as space, for example, under the concept of series or 'manifold.' The only universe of discourse that can be framed for it is reality or the process of experience as dichotomized, on the one hand, into being, the world of positive facts and values, which can be held apart from their context, indicated or pointed to as well as described in terms of their other; and on the other hand, into non-being, the negation of being, the transmutation of facts and values. In the process of experience being and time are thus inseparably locked into one Hegelian, Kilkenny-cat embrace. This ought to satisfy even the most voracious Hegelian appetite for opposition. But there is nothing mystical about the time character. To thus negate our meanings, to make our judgments false and so to make new judgments necessary is precisely its character. I have spoken of time as non-being, not because I regard it as unreal, but because it negates that which is. If we were to find a cold, logical equivalent for the warm transitiveness of our immediate experience we should be obliged to call it the non-identity-of-what-is character. That is a very cumbersome adjective, but that is what it *does.*

But inasmuch as negation is never negation of itself, but is always transmutation, and therefore novelty, therefore time *process,* though not the time concept, is a very positive and very rich affair. Process is the bearer of all reality and contains within itself the prophecy of new reality. And when process is conscious of itself, of its own meaning, we call it activity or will.

Accounting for transmutation as due to the time character may be regarded as a lazy way of getting rid of the responsibility of accounting for the changes or sequences in our experiences. Not so. Transmutation in general does not account for any particular transmutation. The fact that physics has assumed motion as a

property of bodies has not saved it from the responsibility of investigating the laws of motion and describing the particular sequences. That time is a property of reality simply means that facts are unstable, but *how* facts shall be transmuted, the quality and rate of transmutation, must be explained by their own structure and their place within the system of facts. The concept of change in general stands in the same relation to the particular changes that the demand for law in general stands to the particular laws or connections.

The term absolute as I have used it has caused no small deal of trouble. I have defined the time character as absolute non-being in order to differentiate it from the negative judgment as ordinarily employed. The latter has reference to contrasting being with being. The time character does not have to do with the fact that there are coexisting differences or that we must now make different judgments in regard to reality. Rather the time character infects all being; it has to do with difference that creeps in at the same point and everywhere. It is a property of all reality; not only an adjectival content of all reflective experience, but of reality whether it is reflective or whether it is a lower grade of experience, *even* when, perhaps, in its own right it can not be characterized as experience, because it makes such a difference to all forms of reality for *us* that we must make different judgments of what would be the same. By absolute, therefore, I simply mean that time is a real property of our experience-world, subjective and objective, and not a derivative of being in any form, as the Hegelians would have it. It is irreducible, as red and sweet are irreducible qualities of experience; but, while these are specific contents which can be marked off and indicated, the time character is a generic adjective, a property of all reality. It is the seed of instability that must be conceived, not to account for any particular motion, change, or variation, but for motion or change at all. The particular transmutations or changes must be accounted for by the character of the existing system of being, given this all-pervasive property of time.

I have tried thus to give the concept of time a very specific and technical meaning in our logic of experience. Not that I have been arbitrary in this. On the contrary I have tried to unravel the character time has in the common consciousness of man, confused though that consciousness be. It is also the character which we need in order to make our description of experience consistent and complete. We can thus produce conceptual continuity and flow in the previously static and discontinuous categories of our logic—thus make the wheels of experience go round in thought as they do in fact. While our logical system can in no wise be a substitute

for the warm and concrete process of experience, it ought to furnish a complete symbolism for concrete experience.

I have two quarrels with idealistic theories so far. One is that even though reality for us must be thought of as experience stuff, yet all experience is not reflective, and can not therefore be reduced to the conceptual type or to purposive definition. Concepts in relation to a large part of experience retain an instrumental or tool character. They are, with reference to non-reflective experience, merely symbolic equivalents in the service of the willing, purposive moment. But my other quarrel is that the ontological conceptualists have failed to make their conceptual scheme exhaustive. Hegelian dialectic at best keeps jumping on one leg in its attempt at a static scheme of reality. Its non-being is not differentiated from being. But we need the negative concept as well as the positive. The relativity of meanings is as obvious a fact as that we have meanings. This relativity of transmutation, however, can not be exhausted *a priori,* but is the character of experience as ascertained *a posteriori* through the very failure of our meanings to express what they mean to express, the nature of the facts. Not one system of meanings, but ever new systems of meanings are required in our world. Thus reality as concrete out-Hegels Hegel and makes ghosts out of our logical absolutes.

I know some people have a violent antipathy for everything abstract, and they are right that we must not mistake abstractions for realities. But without abstraction and conceptual construction we should have no science or philosophy. We should simply live in the immediate moment. Truth, or conceptual analysis and construction, is the means through which the concrete willing ego strives after greater completeness of insight and appreciation. It is this concrete and active self which constructs the past and future to symbolize its own conditions of activity as a time subject. It is this concrete self which is conscious of *direction,* because it is conscious of purpose; to which the data and habits of the now are only a means toward realization of demands for unity and wholeness; for which, therefore, the death of the old meanings means the birth of new meanings better expressive of its concrete life. In this willing, purposive, conscious ego, not in abstract systems of categories, lies the principle of negativity through which the ego is ever transcending the old meanings and ever reconstructing itself in terms of new meanings and systems.

Reality in the concrete, as we take account of it in our reflective moments, is a willing process. I do not see, however, how we can regard time itself as an attitude on the part of the will. I do not see how we can be said to will what we do not now will or intend

what we do not now intend. The new meaning, however minutely we may analyze the conditions of its appearance, must be looked at as a gift; it is not made simply out of the whole cloth of the old. It can not be predicted therefore. It can be known only *a posteriori*. For this new meaning the past *is* no longer except as it has been transmuted and lives in the present meaning, as looked at from its point of view. In it is the hope of the future which can only come through the death of the present, 'when we dead awaken.'

JOHN E. BOODIN.

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SELF AND NOT-SELF IN PRIMITIVE EXPERIENCE[1]

IN our earlier and cruder experiences there is no clear-cut distinction of self and not-self, and hence no definite consciousness of the boundary-limits and the relations of these two constant factors in human experience. The child's earliest consciousness is void of any well-defined sense of self or not-self. The materials which will later supply the basis for a distinction between these two poles of experience are present in *feeling* or *sentience*, but have not yet been differentiated and compared. On the one hand there are the warm and vivid feelings of the organism, *i. e.*, vague uneasiness, appetites, pains, satisfactions, etc. On the other hand there is a dim and growing sense of extra-organic factors in their relations to the vital organic feelings. The primitive self's first vague idea of itself is framed in terms of its organic needs, and its first idea of the not-self is simply that of a means or hindrance to organic satisfactions. The first felt self is stomachic. This basis of distinction and relation between self and not-self does not wholly vanish in adult life, and some adults never get very much beyond it. They remain sunk in sensuous appetites. They oscillate between organic desires and satisfactions.

Experience thus begins without any reflective consciousness of either the distinction or the relation between self and not-self. The latter is first known in an immediate reaction or experience of the self as organic and appetitive. Knowledge has its roots in a state of *psychical immediacy* in which self and not-self meet and blend.

The most rudimentary judgments, viz., those involved in the simplest state of sentient experience, are the direct contact-points of self and not-self. When the child or the savage exclaims, 'It is hot,' 'It is cold,' 'It tastes good,' or even when he makes such a simple exclamation as 'Ugh,' he affirms his own pleasurable or

[1] Considerations introductory to epistemology.

painful organic state in relation to a state or occurrence in the not-self. And in these simplest qualitative *judgments* we have at once the very first beginnings of knowledge and the germs of all its later developments. For we have, even at this point, not an absolute datum of knowledge passively received by the self, not a raw fact thrown into the mind from without. It is impossible by any reach of psychological analysis to get down to an absolute rudiment of knowledge—a purely given datum of raw 'unmentalized' experience—in whose constitution the self has not participated. The very first stage of psychical immediacy in experience involves the *reaction* of the self to a stimulus. And our so-called simplest datum of sense, perception, is the result of a judgment or reaction of the self in which the latter relates its own state in some vague indefinite fashion to the not-self. If we were to begin with the wholly gratuitous assumption that the first step toward knowledge must consist in the intrusion into consciousness of a rudimentary datum wholly unaffected by the self's intellectual activity and coming from a not-self wholly disparate in kind from the self, we should thereby make it impossible to take a single step towards understanding the development of knowledge. Moreover, we should be setting up a hypothetical atomic datum of mind which has no foundation in experience. We must begin with self and not-self as mutually involved factors in a common experience. *Now the conditions of that immediate experience or simple judgment of sentience in which self and not-self are found together can not be determined at the outset of an epistemological inquiry.* At present we can only note and emphasize the fact that knowledge begins in a simple judgment of immediate experience—a judgment of feeling or sentience as yet devoid of explicit conceptual relations, but involving both self and not-self, and therefore containing the germs of conception and all other functions of thought.

The immediacy and unreflectiveness of the earlier mental processes in thought may be illustrated by that prevailing philosophy to which Mr. Tylor has given the name of *Animism*. In the mental attitude represented by this view it is the immediate and unreflective character of the relation between self and not-self which leads the savage to attribute life and sentience to inanimate objects as well as to trees, plants and animals. Struck by some phenomenon of shape or movement apparently analogous to those shown by men or animals, he immediately refers his own general conscious state in a vague fashion to the objects concerned. He spontaneously *ejects* his sentient selfhood into them. It would be the first business of epistemology, in giving an account of knowledge, to trace the rise of the principal forms of reflective thought out of this immediate

psychical life, to inquire how discursive knowledge becomes interposed as a third term between the immediately felt soul-life and the world of the not-self, and how, through discursive thinking, the primitive and apparently homogeneous immediate experience of the sentient self becomes differentiated and organized.

The first impulse towards reflection arises from the shock caused by a felt discrepancy between those elementary desires of the self which tend to issue directly in impulsive activities, and the incoming experiences of pain, disappointment, etc., resulting from a failure of these impulses to bring the satisfaction desired. The impatience of hunger may lead the hunter to seek his quarry incautiously and to lose it. The discrepancy between desire and fulfillment makes necessary the *inhibition* of some of the primitive impulses. The self must hold desire in leash until some measure can be taken of that part of experience which signifies disappointment and the balking of the self's impulses and so arrests attention and compels thought. It is first in this sort of experience that conscious *attention* can properly be said to come into play. The child impulsively grasps the candle. The resultant pain compels the concentration of attention on the nature of the object. And *attention* to an experience means *retention*. The earliest thought, then, is directed predominantly towards the world of the not-self. This is the first object of sustained inquiry. The first practical need is to get adjusted to that objective existence (not yet known as an *order*) which so conditions and interferes with the satisfaction of the felt needs of the self. The primitive idea of nature is the product of hunger and fear stimulating the self to reflection as well as to action. And so, too, cosmology and physics, the sciences of the objective order, precede psychology and ethics, the sciences of the subjective order, in the development of systematic thought. And cosmogonic myths and stories of descent from animistic nature-powers antedate history.

Experience is a wider term than *knowledge*. The term experience expresses the unity of all conscious content, the presence in consciousness of every process and relation which belongs to the self as a living unity functioning in immediate feeling, in sensuous perception, in reflective thought, in impulsive action, in deliberate volition, in emotion and sentiment. Knowledge is a differentiated and highly organized form of experience. Whether all experience must submit to this organizing process remains to be seen. What concerns us now is that the organizing process of thought, which constitutes knowledge in all its stages from its rudimentary practical beginnings up to its most highly abstract forms in science and philosophy, must go on *within* experiencing centers or selves.

Wherever we may fetch up, we must at least begin with the principle that the *esse* of things for human thought appears to be their *percipi*. There may ultimately prove to be more in the being of things than their being for a human self, but this *more*, to be legitimately grounded, must be established in relation to the being of things for a consciousness; *i. e.*, we must use experience to transcend experience. And experience means primarily presence to a conscious self.

Experience is from the outset a totality involving both subject and object. At first this totality is of a felt and implicit character. Distinctions must be developed in it for thought before the ego and the non-ego can be brought into explicit relations with one another and the totality to which they belong be made articulate. The child *feels itself* in a vague *world*, but the educated man *knows* himself reflectively in distinction from, and in relation to (these are two sides of the same thing) a world which has for him an organized and articulated character. At first, then, the distinction between self and not-self is not clearly drawn. For the naïve consciousness, knowledge of the world is quite as immediate and direct as knowledge of the self, and, indeed, the former knowledge bulks larger, seems clearer and more direct. The sharp antithesis between the self and the world is the product of reflection on an experience which is at the outset only vaguely and spontaneously recognized as *trans-subjective*. The not-self represents at this early stage simply the self's practically determined judgments that things have an activity independent of the self. The self *must* recognize a not-self and qualify the latter with some elements of its own experience. The problem of the objective validity of knowledge is decidedly a product of sophistication, of a reflective thinking, which, beginning in the clash and contradictions of experiences, is necessitated to work itself out to the bitter end. Moreover, rightly understood, this problem is at the outset simply the question of formulating the relations of certain specific experiences within the whole of experience, viz., the relations between that group of experiences which is suffused with the peculiar warmth and intimacy which leads me to call it my own, and the more colorless and impersonal fringe or periphery of experience. It may be that, in working out these relationships of the self and not-self, we shall be led beyond experience to its implications in a region which is not immediately given or experienced. But we must not pass beyond experience unless the growing rationality of the latter authorizes us to cross its boundaries in the very interests of its own rationality.

There remains to be noted here one important feature of human experience. As soon as knowledge begins to be clearly formulated (in the conception of *order, causal relations,* etc.), and an objective

world is distinctly recognized or judged to exist in distinction from the experiencing subject, this world is regarded as one which must exist for *all* thinking subjects. In other words, as soon as the self learns to distinguish between itself, other selves and an external world it recognizes that there must be a *common* or *universal* element in the experiences of different selves. And in the very first act of cognition the self implicitly makes the judgment of referring a part of its own experience to this world of a common experience which is conceived as accessible to other selves, *i. e.*, as a *social* world of experience. The significance of this fundamental principle of cognition would demand separate consideration.

This common or universal quality of judgment is embodied in the *concept*, and hence conceptual knowledge is knowledge communicable and valid for all. The concept or general notion is not antecedent to judgment. The concept is a synthesis of particular judgments, *e. g.*, the concept of a candle as that which gives forth light, heat, etc., of an orange as that which feels round, has a sweetish acid taste, yellowish color, etc. The formation of these concepts would not be possible if there were not a universal quality or relation in the most particular judgments. Analysis extracts the universal relation from the several particular judgments, and synthesis unites them to form a concept. The concept is the expression and resultant of judgments and the latter involve both analysis and synthesis.[2] The definition and organization of our every-day judgments in their relations to one another is the definition and organization of experience into a system of knowledge, and the unity of knowledge is implicit in the growth of experience from the outset. Judgment may be compared in this respect with *will*. At first the whole self judges or reacts vaguely and more or less at random, just as it wills at first without clear direction towards the end desired. The definition and organization of judgment in the progress of knowledge is like the growth in definiteness of purpose and mastery of means to its fulfillment, which characterizes the increase in efficiency and self-control of the human will.[3] We judge reality from a single and vague standpoint and imply the connections of the single judgment in a system. We will a single end and imply the system connected with this single act of will. In other words, from the very beginning of our *cognitive* life we *assume* the rationality of our world as experienced.

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[2] J. E. Creighton, 'Introductory Logic,' Chapters 20 and 21. G. F. Stout, 'Manual of Psychology,' Book 4, Chapter 4.

[3] B. Bosanquet, 'Essentials of Logic,' Section 2.

SOCIETIES

FIFTH ANNUAL MEETING OF THE WESTERN PHILOSOPHICAL ASSOCIATION

THE Western Philosophical Association held its fifth annual meeting on Friday and Saturday, April 21 and 22, at the University of Nebraska, Lincoln. Five regular sessions were held, besides several happily arranged social gatherings for which the association was indebted to the hospitality of the faculty of the philosophical and psychological departments of the University of Nebraska. Seventeen members were in attendance. Pains having been taken not to overcrowd the program with formal papers, it was possible, in such a relatively small gathering of specialists, to have a full, vigorous and fairly general discussion of nearly all the topics presented, and to get the stimulating effect of genuine philosophical debate. The address of the retiring president on 'Psychology and Education' was delivered on Friday evening at a largely attended public session. At the business session, it was voted that the regular meetings continue to be held during or near the time of the Easter recess; this will prevent the association from joining, in its collective capacity, in the proposed meetings at Cambridge next winter. Invitations for the next meeting were received from the University of Kansas and from Washington University; the selection of a place was left to the executive committee. Six new members were elected: Mr. H. G. Campbell, Professor C. W. Fordyce, Professor Frank P. Graves, Professor A. E. Monin, Professor J. L. Merriam, Professor J. D. Stoops. Officers for the next year were elected as follows: President, Professor J. H. Tufts; vice-president, Professor F. C. French; secretary-treasurer, Professor A. O. Lovejoy; additional members of the executive committee, Professor W. B. Pillsbury, Professor A. Ross Hill. Abstracts of papers are appended.

ARTHUR O. LOVEJOY,
Secretary.

The Concept of Time: JOHN E. BODIN.

Kant was the first philosopher to see the epistemological importance of time and space. Time, however, while less amenable to logical pyrotechnics than space, is epistemologically more fundamental, because while contents in space are reversible or interchangeable, which means that space does not affect them intrinsically, time makes it impossible to take our contents more than once or makes a difference to the contents themselves. To define time means precisely to show what that difference is. To define a concept, namely, is to give its genus and differentia. In the case

of space, for example, series or manifold may be regarded as the genus, in which case extensive series or extensive manifold would mark space off from other series concepts. But what about time? If we consider time as a series, what are its differentiæ? The answer would be: The time series is a series in which contents keep passing out and coming in and in which no position can be defined with reference to any other position, because every position is shifting in value with reference to every other. But this is to contradict the fundamental nature of the series concept. Series, then, is not the proximate genus of time. The only universe of discourse we can have for a definition of time is experience or reality. Time is that aspect of experience which makes it both possible and necessary to make different judgments with reference to the same point of reality and with reference to the same attribute or within the same universe of discourse. It thus saves the law of contradiction by furnishing a new dimension by means of which incompatible judgments can occupy the same space without destroying each other. Time, unlike the positive characters of reality, can only be defined through its other; it can not be pointed to. But the peculiar transformation of that other is due to its individual character and its place in the system of positive values. Time is an absolute property in the sense that it is ultimately real, *i. e.*, can not be derived from any form of positive being. It, on the contrary, makes all positive being relative.

Time as an Absolute Principle of Negativity: E. L. HINMAN.

This paper, prepared to open a discussion of Professor Boodin's monograph on 'Time and Reality,' criticized the argument of the monograph from the standpoint of absolute idealism. Four main points were urged. In the first place, any attempt to define time presupposes that time is a member within a larger whole, and is relative to a principle or system which transcends time. The conditions of the logic of definition, then, render futile any effort to define time as an ultimate principle which conditions everything, and the effort leads and must lead to a hollow and empty result. In the second place, the logic by which the monograph infers the ultimateness of time might be used with at least equal cogency in the contrary direction; with greater cogency, if we take account of the fact that the timeless must be admitted in some form in any case. In the third place, the central principle of absolute idealism, the ontological significance of the concept, is the vitalizing principle of the entire argument, and should be followed to its conclusion, but is not consistently worked out. In the fourth place, the author of the monograph, shunning the logical development of

absolute idealism, has hypostatized absolute non-being. The result is a conception contradictory in itself, and bearing the germs of impossible logical demands.

The Category of the Unknowable: DAVID F. SWENSON.

The unknowable is an important concept, which in some form or other has engaged the attention of most medieval and modern philosophers. The doctrine of H. Spencer is an adaptation of Sir W. Hamilton's position, and this in its turn goes back to Kant for its primary impulse. It is in Hamilton also intimately connected with a distinction between knowledge and belief which was first clearly laid down by Aristotle. The concept of the unknown covers that of the unknowable, but is not identical with it. All that is unknowable is unknown, but not all that is unknown is unknowable. The unknowable is the concept of the unknown pushed to its absolute limit. The unknown is a category having significance for both theory and practice. In each realm, however, the significance is a different one, immediately at least, if not ultimately. In the field of theoretical knowledge it means that science is progressive, not stationary. Since knowledge is essentially systematic, it also means that accepted theory must always be held subject to modification and reorganization. As long as there is anything unknown, every science which does not abstract from its relation to the reality which unfolds itself in space and time (excepting such sciences as have no other relation to concrete reality than that involved in the derivation of their presuppositions from experience), must remain hypothetical in nature, not necessarily in respect of the individual facts on which it rests, but in respect of its interpretations, and ultimate concrete organization. Such sciences being hypothetical, the only test of validity actually applicable to them is workableness, including in that term ease and economy of thought. And as long as there is anything unknown or unfinished, a synthetic philosophy which shall systematically embrace the whole of reality, is rendered impossible. The unknowable is that which can not be known. Knowledge of the unknowable would involve self-transcendence. When knowledge is looked upon as a transforming rather than as a revealing function, the object of knowledge becomes an unknowable 'Ding-an-sich.' As so conceived it is without significance. There is a confusion of thought in identifying such an object with the sensory stimulus, which is of course either known or knowable. In Herbert Spencer the unknowable is, among other things, that which can not be intuitively represented in thought with absolute completeness. Not only the concepts mentioned by him, but every individual object as such, is in this sense unknowable. Every totality involves the

infinite. Every object involves in itself an infinity of possible sensible experiences, and involves, in its relations, an infinity of possible and actual connections with other objects. We can thus never know what an object is all in all; that would indeed be to know 'what God and man is.' The totality of an individual object as such, as well as the totality of things as actual, exists only for the will. We apprehend reality in belief. Knowledge is the instrument by means of which the will comes into intelligent relation with external reality. Knowledge is of what a thing is; belief, that it is. This is parallel to the old Aristotelian distinctions: *ὅτι ἐστι — διότι ἐστι*; *πρῶται οὐσίαι — δεύτεραι οὐσίαι*; form with matter—form without matter.

The Relation of Psychology to the Philosophy of Religion: F. C. FRENCH.

As physics brings all unusual and apparently abnormal phenomena of nature under natural law, so modern psychology brings all abnormal mental phenomena (hallucinations, trances, etc.) under the ordinary normal laws of our psychophysical life. The doctrine of the subliminal self in psychology plays much the same part as the theory of potential energy, or the invisible ether in physics. As Professor James points out in his 'Varieties of Religious Experience,' by means of the subliminal self the psychologist can explain sudden conversions, celestial visions and mystic ecstasies. The subject of such experiences, coming as they do from the hidden region of the subconscious, very naturally ascribes them to a supernatural source. The old psychology was compelled either to deny the very fact of these experiences or to accept the supernatural inference. Modern psychology accepts these experiences as subjective facts, but denies their ontological significance. Professor James departs from the standpoint of science when he suggests that these phenomena of the religious consciousness may be doorways into the spiritual world. Whatever metaphysics or epistemology may say of such a view, psychology as a science must regard these religious experiences as purely phenomenal. It does not find in them any manifestation of the transcendent, although their possessors often so interpret them. Science is as rigorously phenomenalistic in the mental sphere as in the physical sphere. For the scientific mind there is no more possibility of a subjective miracle than of an objective miracle. Many religiously minded people have been led by the physical sciences to give up the notion of supernatural manifestations in nature, but have still regarded certain religious experiences as having a transcendent value. This raises for the philosophy of religion the problem: if the mental realm

be as phenomenal as the physical, have we any ground for a belief in the transcendent? The answer in brief is that we have no perceptual evidence of the transcendent either in the physical or in the mental realm, but the fact that our experience, both outer and inner, is intelligible, subject to law and to scientific interpretation, is the best evidence that our world is the work of mind. We do not see the transcendent through gaps in the empirical; we know the transcendent through the very rationality of the empirical. This line of thought, of course, has nothing to do with the psychological causes of religious belief, but simply with the philosophical justification of such a belief.

The Esthetic Attitude: ROBERT MORRIS OGDEN.

The esthetic attitude is a state of contemplation distinguishable by its conformity. Affection is a certain aspect of the total conscious state and, as referred to an object or group of objects within the complex, is expressed by a conformity or non-conformity of this to the whole. Aside from the attentive apperceptive state which is uppermost, one must take into consideration 'subconscious' functionings of the *Bewusstseinslage* which are important in determining this conformity or non-conformity. Pleasure is an expression for active healthy functioning of the organism. It is also an expression for a conformable mental whole in which neither active physical nor mental processes having a definite purpose strike the dominant note. An objectifying and justification of the concrete state itself characterize this esthetic pleasure. Art has its significance in providing objects which arouse conformable mental states of this sort. But the esthetic attitude is not limited to works of art. It may be adopted toward any situation in life, and therein rests its great significance to the thinking man. It depends, then, in its broadest scope, on a certain clear, sane world-view which sublimates all. It thus detects the ideal essence in all, the logic to every situation. Thus it is that even sorrow and pain, which as active functionings are unpleasant processes, possess, no less, esthetic elements which, when made dominant, bring peace and calm and have an elevating intent. There is no esthetic displeasure, properly speaking. The esthetic means conformity, and non-conformity always prompts desire for action or thought-process, which in its nature is unesthetic. The ugly in art finds its justification as a motive for a certain quality of affection which the genius of the artist raises above its practical distasteful significance into the realm of the esthetic. Esthetic objects may be of three sorts: (1) sensation complexes, a low order because lacking in fullness and permanent interest; (2) humorous situations conformable in their mere natures because all

earnest and purposeful intent has been extraneously removed; and (3) any complex from which one can derive a complete and ideal satisfaction without further desire or purpose.

The Meaning of Right: F. C. SHARP.

The assumption upon which this paper rests is that approbation and disapprobation are the ultimate source of moral distinctions. Its problem is a determination of the meaning of the words right and wrong in accordance with this assumption. On this view right would mean generically the approved, but it applies to but one of the many things that are objects of approbation. Right is a term which I apply only to volitions, and only to such volitions as I approve of every one having under the given conditions. A consideration of three obvious objections to this view will make the position clearer. It will be urged that there are judgments of propriety and decency which are not moral judgments, which nevertheless seem to fall under our definition. But it is denied that they do so, on the ground that they are judgments not upon what the person aims to do, but upon a by-product of his aim or purpose. It will be further objected that our fundamental assumption makes moral distinctions purely subjective. It is admitted that this objection would be a serious one if substantiated; but it is claimed that the right, objectively considered, is not that which any one whatever chances to approve, but is the approval of a completely developed man, acquainted with all the relevant facts of the situation. Finally it will seem to many that our definition omits the fundamental ethical category, that of obligation. The attempt is made to meet this objection by showing that the feeling of obligation is definable as approbation qualified by the feeling of shrinking from the disagreeable.

Some Inconsistencies in the Modern Theory of the Judgment: W. B. PILLSBURY.

The inconsistency upon which most emphasis was placed lies in defining judgment as the ascription of reality to the given, and then retaining as judgment the proposition of formal logic under the assumption that the subject is the given whose reality is predicated. It was contended first that there is nowhere in consciousness a mere given, but that everything conscious, qua conscious, must have meaning. Consequently the psychological correlate of the judgment is the act of attention, while in the proposition there is essentially and always, two acts of attention, two judgments in the meaning of the definition. The only possible reason for regarding the proposition as a judgment under the modern definition is that

at the moment of speaking the subject is often relatively unimportant because the product of an earlier judgment, or that in consciousness there has been no subject, but that it has been introduced in speech as an after-thought. It is proposed to restrict the term judgment to the interjectional, the impersonal and perhaps the demonstrative judgments of current usage, and to designate by inference the mental process which lies behind the two-term proposition of formal logic. This second suggestion is favored by the growing tendency to regard the conclusion as the only vital part of the syllogism, and to regard the premises as at most tests of truth rather than as antecedent conditions for the attainment of the conclusion.

The Effect of Incentives on Work: W. R. WRIGHT, reported by W. B. PILLSBURY.

Experiments with the ergograph showed that not only do such incentives as working down to a line or block that limits the extent of movement make possible a greater amount of work than can be done without such incentive (*i. e.*, when the hand moves in the ergograph without having any definite object or point to reach), but also that work performed under the influence of definite incentive is less fatiguing than the same amount of work without incentive.

REVIEWS AND ABSTRACTS OF LITERATURE

Hume: The Relation of the Treatise of Human Nature (Book I.) to the Inquiry concerning Human Understanding. W. B. ELKIN. New York, The Macmillan Co. 1904. Pp. ix + 330.

While the aim of this book—an elaboration of an earlier dissertation—is, in the writer's own words, 'to clear up the obscurity regarding Hume's exact position in his two chief philosophical works,' and, consequently, a large part of the work is made up of textual analysis and comparison, the more ultimate purpose is clearly to contribute to a more adequate conception of Hume's place in the history of philosophy which the writer feels has been 'inadequate and defective.' To this clarification (needed perhaps as much in the case of Hume as in that of Kant) the author has contributed both positively and negatively; positively, in that through this comparative study the essentials of both works (which are described as positivism in epistemology, scepticism in metaphysics and agnosticism in religion) clearly emerge; and negatively, in that he disposes of the misconception, leading inevitably to confusion in regard to Hume's position, that the two works represent different standpoints.

The source of this inadequate conception the writer finds in the assumption that the 'Inquiry,' representing the more mature view of the author, should be taken as a basis for the estimation of Hume's position,

and from a defective interpretation of the two works according to which the 'Inquiry,' it is supposed, represents a real and significant change in the author's point of view. Both these positions, the assumption and the interpretation, Elkin finds unwarranted and sets over against them the following positive theses: (1) "The 'Inquiry,' when interpreted in the light of the 'Treatise,' is essentially identical, both in point of view and in doctrine, with the earlier work." (2) "Hume's peculiar significance for the history of philosophy lies wholly and solely in the 'Treatise.'"

The first thesis, the major premise of the argument of the book, is worked out in detail, first, from the internal evidence which arises in a systematic comparison of the two works on all the important points discussed by Hume. The work here is exhaustive and scholarly, with abundant and, in so far as the reviewer has tested them, accurate references to Hume's works themselves and to the Hume literature. To reconcile with this thesis of the fundamental identity of the two works the notable omissions from the 'Inquiry' of important features of the 'Treatise' as well as changes in emphasis, Dr. Elkin believes that no change in the *intrinsic* purpose of the author need be assumed. These omissions and changes in emphasis, he thinks, may all be accounted for by referring them to purely *extrinsic* motives, the desire to simplify and popularize, to gain fame and notoriety, etc. The grounds for this hypothesis are found in the external evidence of Hume's own letters and in the letters and comments of his contemporaries. It is here that the most interesting and original elements of the research appear, and while the question of method here involved—the extent to which the critic may carry such a distinction as that between intrinsic and extrinsic aims, or indeed the more ultimate psychological question of the extent to which such a distinction exists in an author's mind—is a difficult one, it would, nevertheless, when the evidence is properly weighed, appear that Hume himself believed the two works to be essentially the same, and, in so far as he was conscious of motives, made the modifications of the 'Inquiry' under the influence of the extrinsic motives attributed to him.

The following is the writer's own summary of his conclusions: "The position of both works is identical on the following points: intrinsic or primary aim, cause of perceptions, association of ideas, abstract or general ideas, cause and effect, philosophical probability, liberty and necessity and the reason of animals. The position of both works is practically the same on the following points: subject matter, method, nature and classification of perceptions, mathematics, belief, material substance and external existence. Agreement is implied, although not formally expressed, on the following points: the ideas of space and time, intuitive knowledge, the distinctions between natural and philosophical relations, between impressions of sensation and reflection and between the ideas of memory and imagination. On the subjects of unphilosophical probability, self and spiritual substance, it may be inferred from the general tenor of the treatment of related questions, from incidental references in other writings, and from statements in letters, that Hume's view was the same when he wrote the 'Inquiry' as when he composed the 'Treatise.' From his re-

marks on personal identity, in the appendix, it would seem that his view on this question underwent a change. The extent of this change, however, it is impossible to ascertain" (p. 293).

The second thesis—that "Hume's philosophical significance lies wholly in the 'Treatise'"—would seem to follow from the proof of the first. With respect to the treatment of particular philosophical problems (with the exception perhaps of his discussion of personal identity) this is probably true. Nevertheless, here again, for the critical historian of philosophy, a subtle question arises. If it is true, as Elkin says, that Kant, being unacquainted with the 'Treatise,' because of certain omissions in the 'Inquiry,' misinterpreted Hume on certain fundamental epistemological questions, may it not also be true that we should misinterpret him if we were acquainted only with the 'Treatise'? Elkin himself recognizes (p. 295) "his clearer psychological insight into the nature of belief and the function of instinct when he wrote the 'Inquiry,'" and that the latter is, therefore, much more positive than the 'Treatise.' Must not the historian with perspective see in him, then, not only the *enfant terrible* of empiricism, but also, in his later days, made mellow by contact with concrete experience, a harbinger (of course, always in his own way) of the voluntaristic reaction against the intellectualism of the eighteenth century? If there is such an intrinsic change from the 'Treatise' to the 'Inquiry' it is, perhaps, as Elkins says, merely 'an interesting fact' and 'whether it has any significance, aside from that, seems to be beyond the power of determination.' Be that as it may, a belief in its significance will, nevertheless, for many of Hume's readers probably remain a 'pious opinion.'

In conclusion, it may be noted that the value of the book as an aid to the study of Hume is much increased by an appendix giving in outline the parallelism between the 'Treatise' and the 'Inquiry,' and by a very complete bibliography. Its most conspicuous defect is the absence of an index.

WILBUR M. URBAN.

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Principles of Physiological Psychology. WILHELM WUNDT. Translated from the fifth German edition (1902) by EDWARD BRADFORD TITCHENER. Vol. I., with 105 figures in the text. London, Swan, Sonnenschein and Co., Ltd; New York, The Macmillan Co. 1904. Pp. xvi + 347.

After a rather curious series of experiences, Professor Titchener has finally given us the beginning of his translation of Wundt's *Grundzüge.* It seems that in 1890 he carried with him to Leipzig a complete translation of the third (1887) edition of the *Grundzüge,* only to learn that a fourth was soon to appear. At the end of 1896 another translation was begun, this time of the fourth edition, and finished in 1899. When this was ready the fifth and final edition of the *Grundzüge* was in prospect. Now, however, no sixth edition can be possible and the publication of Part I. of the *Grundzüge der Physiologischen Psychologie* is a fact.

The difficulties of a translation of Wundt Professor Titchener has well stated. He has met them boldly and with a success possible only to a

man of his experience. The much-dreaded 'three-decker' German sentences, as Mark Twain once characterized this class of writing, have been broken up into separate sentences in the translation. I have carefully compared parts of the translation with the original, and have nothing but praise for the manner in which this has been done. The eight-line German sentence is taken and resolved into its simple parts, the points of division being determined by the connectives. And this has been done without any loss to the literalness or exactness of the English version.

Other good features of the translation are the division of the work into *parts* instead of *volumes,* the index of names and subjects at the end of each part, the pagination of the German edition placed on the binding sides of the pages of the translation, and the incorporation of ten pages (pp. 16–26) of the original fourth edition in the English version. I would suggest that this last named be done wherever the translator thinks it will add to the value of the work, since the division of the work into parts will allow of enough space for this purpose.

To those interested in the final appearance of the work I give below the number of pages to each part, its place in the German edition and its title as given by Professor Titchener.

English.	German division.		
Part I.	Vol. I.	pp. 1–138	338 pp.
Part II.	Vol. I., II.	pp. 339–553, 1–369	583 pp.
Part III.	Vol. II., III.	pp. 370–686, 1–106	422 pp.
Part IV.	Vol. III.	pp. 107–319	212 pp.
Part V.	Vol. III.	pp. 320–676	356 pp.
Part VI.	Vol. III.	pp. 677–794	117 pp.

I. On the bodily substrate of mental life.
II. Of the elements of mental life.
III. Of the formation of sensory ideas.
IV. Of the affective processes and of voluntary actions.
V. Of the course and the connection of mental processes.
VI. Final considerations.

Since each part is to have its own index of subjects and names, the special *Gesamtregister* is unnecessary. In the index of names, Wundt gives over 1,050. If the task be not too great, would it not be possible to fill out the 117 pages of the sixth part with an alphabetical bibliography similar to those given in Volkmann (fourth edition) and by Jodl (second edition)? It seems to me that if this be not too much to ask, such an addition would greatly enhance the value of the translation, if this indeed be possible.

FELIX ARNOLD.

NEW YORK CITY.

L'imagination. I. Les images visuelles. II. Les images auditives. III. Les images motrices. É. PEILLAUBE. *Revue de Philosophie,* Vol. II., 1902, pp. 701–718; III., 1903, pp. 172–189; V., 1905, pp. 560–578.

I

In his preliminary discussion, M. Peillaube emphasizes the fact that among early writers, the visual imagination was taken as the sole basis,

while the subject was studied *en bloc,* imagination being treated as a single faculty. Only since Taine and Galton has a more discriminating analysis been made. Now, we study not imagination, but images, making our division according to the sensations upon which the images are based. Psychology now goes into details, instead of dealing with generalities. When, however, we have decomposed the complexity of mental life, and treated visual, auditory, motor and other images, there still remains the question of mental synthesis. To stop with images would leave us with a sort of atomic mind dust, and would leave out of consideration the question of mental synthesis. After this has been discussed there finally remains the question which was put long ago by Aristotle: What is that which we call imagination? What is its nature? How is it distinguished from sensation, from intellect, from memory? The analysis of imagination, then, includes three parts, analysis, synthesis and nature or theory.

The analysis is begun with the visual images. Visual imagery plays an important part with chess players, painters and others. In visual hallucination, the image is so intensified as to produce the illusion of sensation. In hypnotic hallucination, however, the perception quickly drives out the image. Of the method of projection of the visual image, two kinds are observed: (1) The image is situated in the direction in which we believe the object to be placed. There is a feeling of intervening space. We say the image is in front, in the rear, to the left or to the right. (2) This feeling of intervening space is absent. We see the object in its real size, and with the concreteness of reality.

In general, the facts establish the existence of a visual type in which visual imagery predominates, and of a type in which visual imagery is subordinate, the latter being more abstract. The ideal visual type approaches the sensation, while the abstract type replaces detail by schematic outline.

As for auditory images, these are inferior to the visual, since they do not possess the same distinctness and richness. Visual images are determined by time and space, auditory only by time, which is unstable, passing from moment to moment. Auditory imagery is specially prominent in musicians. In hallucination, auditory images, like visual, tend to realize themselves. In dreams, visual imagery is usually more prominent than auditory. Concerning the nature of the 'internal' word or word image, we have two theories: (1) the word image is auditory (Egger), and (2) the word image is motor (Stricker). In general, the auditory image is less concrete than the visual, being determined only by time.

The motor image may be doubted because, as the author states, the sensation is also a question. The antinomy resides in the instantaneous nature of sensation, and the successive character of movement. However, the sensation corresponds to a succession of impressions, and what we have in the kinesthetic sensation is an immediate synthesis. This being the case, kinesthetic sensations are true sensations and hence their images are possible.

While as a type of visual imagery we have that in painters, and of auditory that in musicians, the motor type is difficult to trace. It is found especially in those using their muscles, as the manual worker, the gymnast, the equestrian, the ballet dancer and the like. The motor image seems also to be closely connected with other kinds of image. Musicians have motor images of their fingers, and singers of their vocal apparatus. In hallucination and in dreams the motor image is most readily realized. In hypnotic hallucination the subjects are rarely motor, but in dreams motor images are very numerous. In general the motor image plays a universal part in psychology. Not only does it play the predominating part in memory and imagination with certain subjects, but its influence is felt in all forms of mental activity.

II

The part in these papers which seems to me of significance is the implication that the senses most used must determine the type of imagery. This seems highly probable, and is worthy of further study. What I miss in the papers, however, is a closer analysis of the various types of imagery. It is hardly fair to offer these remarks as criticism, since the author will probably deal with such questions when he takes up the nature or theory of imagination. I take for granted, therefore, that the present study, excellent as far as it goes, will be followed by a more penetrating analysis, and what follows is merely suggestive towards this end.

Concerning the motor image it seems now to be established that it is of a sensory nature and not a pure '*Innervationsempfindung.*' Even Wundt in his fifth edition of the *Grundzüge* admits this (II., pp. 31–36). Physiologically, therefore, we would have not merely the brain cell, but also the end organ in a state of excitation when the motor image exists in consciousness. This aspect of the subject is not even mentioned by M. Peillaube, but he has probably kept it for his final treatment. A similar state of affairs is possible with the visual image. The physiological concomitants would not be the cerebral excitations alone, nor the end organ alone, but the two in cooperation. A few tests with the blind would shed some light on this subject. It is highly probable that the blind (those stricken with blindness in later life) translate all the words denoting visual fields into motor imagery and body attitudes and have no visual images *per se*. In fact, many of us continually do this.

Other features which remain to be discussed, if the subject is to be properly treated, are: the objectification of images, their fragmentariness, intensity, vividness, distinctness, their schematic character, their meaning, and their function as logical aids to action. In the discussion offered by M. Peillaube thus far, we have established the various types of imagery and their existence under various conditions. As his treatment is not yet complete, the above remarks can be taken as suggestions only.

FELIX ARNOLD.

NEW YORK CITY.

Quelques Considerations sur la nyctophobie chez les enfants. M. R. SENET. *Archives de Psychologie,* February-March, 1905. Pp. 350–357.

This article is based on observations made in *l'Ecole normal de Dolores* (*Rep. Argentine*) on 519 children. They point, in the first place, to the conclusion that all children have some degree of fear, either of night or of darkness. According to the statistics, at any rate, all children in the first three school years fear in some degree the night. This fear is independent of the character of the child, as it occurs in children superior in other directions for courage and self-assertiveness. The percentage of night fears falls off rapidly from the third to the sixth school year.

In many of the cases examined, the fear was, to be sure, quite mild and could scarcely be called abnormal, but there are, over and above these, many cases of night fear that amount to real terror. Darkness is, of course, to a certain extent depressing to even the healthy-minded, but this mere depression is not to be classed with true night terror.

The author believes that fear of night is a secondary phenomenon, some other type of fear being really underneath, *e. g.,* fear of assassins, of robbers, of ghosts, etc. "We have not," he says, "found any case where fear of night was not allied with some other fear. If there are such cases they are rare."

He holds that fear of night is of intellectual rather than of emotional origin; that it springs from the recognition of possible dangers favored by darkness. This apprehension diminishes with age because of increase of confidence in one's power of self-defense. Thus it is quite rare among men.

Fear of night involves certain pathological states of the imagination and renders one liable to hallucinations of various kinds, especially auditory, visual and tactual. The following five stages have been noted in most of the cases examined: (1) Experience of depression; (2) general hyperesthesia, especially auditory; (3) the projection into space of centrally initiated tactual and optical phenomena; (4) true hallucinations, auditory, visual and tactual; (5) anguish or distress.

The usual method of trying to drive off the fear by attempting to accustom the child to darkness is condemned as futile. Such treatment serves to augment rather than to diminish the difficulty. The cases of two children are briefly analyzed in proof of this. The fear of darkness is due chiefly to servants telling all sorts of terrifying things to and in the presence of children, or to the effort to restrain them by frightening them. The fears thus aroused are merely exaggerations of the impulse, or instinct, of self-preservation. Thus in various ways children hear things which induce nightmares and impair normal sleep. Fears caused in this way persist for a long time.

The conclusions are as follows: (1) In most cases fear of night is only a collateral fear. (2) In other cases there is a general nocturnal dread, *i. e.,* there is not only fear of night, but of all that night may con-

ceal. (3) This form of fear can not be gotten rid of by opposing it directly. The fear which is underneath must be discovered and dealt with.

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JOURNALS AND NEW BOOKS

MIND, January, 1905, N. S., No. 53. *'Absolute' and Relative Truth* (pp. 1–14): H. H. JOACHIM. – Against the view 'that every judgment is either true or false and what is true is true always and absolutely and completely' the author contends that truth consists in the self-coherence of a system of judgments and is essentially relative. *On the Psychology of a Group of Christian Mystics* (pp. 15–27): J. H. LEUBA. – An account of mysticism, with special reference to the part played by the sexual feelings in determining the character of the mystic's trance and the nature of his conception of God. *Professor James on 'Humanism and Truth'* (pp. 28–41): H. W. B. JOSEPH. – The clearest and most forceful criticism of pragmatism that has yet appeared. *Applied Axioms* (pp. 42–57): ALFRED SIDGWICK. – One conclusion of this article would seem to be that because an axiom is true it does not follow that it can be used as a major premise. *The Meaning of the Time Direction* (pp. 58–73): R. A. P. ROGERS. – Time-direction is due to conscious will; it is, however, objectively real in nature, hence there must be a supreme conscious will animating nature. *Symbolic Reasoning (VI.)* (pp. 74–81): H. MACCOLL. – A discussion of the question as to whether propositions imply the existence of their terms. Discussion: *The Paradox of Psychology* (pp. 82–84): J. SOLOMON. – We only become conscious of mental states as such because we can not always be adequately conscious of their objects. Critical Notices: Campbel Fraser, *Biographia Philosophia:* J. H. STIRLING. *Revue de Metaphysique et de Morale:* NORMAN SMITH. J. T. Merz, *A History of European Thought in the Nineteenth Century:* C. G. KNOTT and J. ARTHUR THOMSON. Alexander Bain, *Autobiography:* W. L. MACKENZIE. J. Milne Bramwell, *Hypnotism:* W. MCDOUGALL. New Books. Philosophical Periodicals. Notes: *Mind Association: full List of Officers and Members. Lewis Carroll's Logical Paradox:* MISS E. C. JONES.

MIND, April, 1905, N. S., No. 54. *The Naturalism of Hume (I.)* (pp. 149–173): NORMAN SMITH. – The author aims to show 'that the establishment of a purely naturalistic conception of human nature by the thorough subordination of reason to feeling and instinct, is the determining factor in Hume's philosophy.' *Has Mr. Moore Refuted Idealism?* (pp. 174–189): C. A. STRONG. – The author believes that a right understanding of the distinction between the feeling of a content and the intellectual consciousness of it will greatly diminish the force of Mr. Moore's argument. *Humanism and Truth Once More* (pp. 190–198): WILLIAM JAMES. – A reply to Mr. Joseph's criticism of pragmatism. The point made by Mr. Joseph, that humanism contradicts itself by ascribing anterior logical validity to the very categories which it claims to

explain as mere psychological products of evolution, is treated lightly by the author, who appears to feel that this extraordinary procedure of the pragmatist is a quite ordinary case of explaining hypothetically the origin of a present fact. *On Analogy and Its Philosophical Importance* (pp. 199–209): H. HÖFFDING. – A defense of the view that truth is dynamic or pragmatic, that all ideas are symbolic, and that explanation, whether in science, metaphysics or religion, proceeds by analogy. *Mr. Bradley's 'Absolute Criterion'* (pp. 210–220): H. V. KNOX. – "The intention of the present paper . . . is to traverse Mr. Bradley's contention that in the principle 'ultimate reality' is such that it does not contradict itself we have an 'absolute criterion' for distinguishing appearance from reality. I hope to show that the principle of contradiction so understood is self-contradictory." *Phenomenalism in Ethics* (pp. 221–234): F. C. DOAN. – "The moral life is to be found and is to get its expression within the phenomenal series and any absolute view of it must be peculiarly ineffectual in attempting to complete the series in facts of experience." Discussions: *The Definition of 'Pragmatism' and 'Humanism'* (pp. 235–240): F. C. S. SCHILLER. – An autobiographical account of the genesis of Mr. Schiller's humanism, and a further elucidation of its nature and meaning as distinguished from pragmatism. *Energy and Effort* (pp. 241–243): J. S. STUART-GLENNIE. – The author gives a brief restatement of a cosmological theory first promulgated by him in 1859. Critical Notices: Hans Cornelius, *Einleitung in die Philosophie:* G. E. MOORE. Georg Simmel, *Kant:* G. DAWES-HICKS. G. Stanley Hall, *Adolescence:* W. H. WINCH. Rudolf Eucken, *Geistige Strömungen der Gegenwart:* DAVID MORRISON. R. K. Gaye, *The Platonic Conception of Immortality and its Connection with the Theory of Ideas:* JOHN BURNET. New Books. Philosophical Periodicals. Notes: *Lewis Carroll's Logical Paradox:* (W.). *Note Concerning Thought and Reality:* SIR OLIVER LODGE.

Driesch, H. *Der Vitalismus als Geschichte und als Lehre.* Leipzig: Barth. 1905. 8vo. 5 M.

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NOTES AND NEWS

THE issue of the *Revue de Métaphysique et de Morale* for May is the third of its series of special numbers, and is devoted to Antoine Augustin Cournot. It contains contributions from eminent French scholars exhibiting the great variety of Cournot's interests, and concludes with an account of the philosopher's life and activity by Professor H. L. Moore of Columbia University. The editor of the *Revue* is to be congratulated on thus bringing to deserved attention the work of one of the most important French thinkers of the last century. Cournot's contributions to philosophy, to economics, to the science of statistics and probability, to the science of education, to the philosophy of history, and to the classification of the sciences, although of very considerable value, have been strangely neglected both by his own countrymen and by others. The more important of the papers in this *numéro exceptionnel* will be reviewed in this JOURNAL.

THE statue of Sir Thomas Browne, which is being executed by Mr. Henry Pegram, A.R.A., is now well advanced, and it is intended that it shall be erected and unveiled in its position in the Haymarket, Norwich, on October 19, the tercentenary of Sir Thomas Browne's birth.

THE courses that Professor Wilhelm Ostwald, of the University of Leipzig, will offer at Harvard University during the first half of the approaching academic year are: 'The Philosophy of Natural Science,' three lectures a week, and 'The Fundamental Conceptions of Chemistry' and 'Catalysis,' each one hour a week.

DR. H. K. WOLFE, formerly professor of philosophy at the University of Nebraska and recently principal of the Lincoln High School, has been elected professor of philosophy and education at the University of Montana.

MR. A. R. LORD, B.A., Oxon., assistant to the professor of moral philosophy and lecturer on political science in Aberdeen University, has been appointed professor of philosophy and history in the Rhodes University College, Grahamstown, Cape Colony.

DR. H. W. STUART has been elected to the chair of philosophy at Lake Forest University to succeed Professor Smith who had resigned on account of ill-health.

DR. T. DE LAGUNA of Cornell University has been called to the University of Michigan as assistant professor of pholosophy and education.